

“A peculiar species of Bee which inhabits these heights [near Lange Kloof] prepares the most beautiful honey from the flowers of the *Brunia*, and stores it in hollow trunks of trees and the clefts of the rocks. The honey is perfectly white; and the waxen cells are so thin that during their collection they melt up with the honey, which may then be conveniently poured into a bottle. Its taste is so fine that I cannot imagine that of *Hymettus* to have been better. It is often collected and used instead of sugar by the colonists of Lange Kloof”\*. Lastly, with regard to the dark Bee occurring in the eastern islands of Africa, namely Madagascar and the Mauritius, Latreille, who describes it as *A. unicolor*, speaks as follows †:—“The honey of this species has a greenish tinge when it is contained in the combs; its colour and excellence depend upon the diversity of the plants of those regions, and upon the temperature. The inhabitants of Madagascar have understood how to avail themselves of the industry of these insects; for we possess a memoir by M. de la Nux upon the form of the beehives which are in use there.” Lepelletier’s statement (Hist. Nat. Hyménoptères, i. p. 403), that this Bee has been introduced into the Mauritius, is contradicted by Grant’s assertion (Hist. of Mauritius, 1801, p. 67), that the Mauritian Bee, which produces very fine honey, is indigenous to the island.

[To be continued.]

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XXXII.—On some Species of Tree-Snakes (*Ahætulla*).

By Dr. ALBERT GÜNTHER.

A. The Subgeneric Division *PHILOTHAMNUS*, A. Smith.

THE whole of Tropical Africa is inhabited by a group of Tree-Snakes which are distinguished by a habit which is not excessively slender; by a normally shaped head; by smooth scales; by posterior longer teeth, not separated from the others by an interval, and not grooved; by a round pupil of the eye; and by a green coloration, almost always varied by the black skin between the scales, and by white dots placed at the base of each scale. Species of this group have been named by Sir Andrew Smith *Philothamnus*, and three different kinds were distinguished by him—*Ph. semivariatus*, *Ph. albovariatus*, *Ph. natalensis*. There can be no doubt that the second of these species is identical with *Dendrophis Chenonii*, Reinhardt, or with *Coluber irregularis*, Leach, of which we have the typical specimens.

At a later period, a similar Snake was described by Hallowell as *Chlorophis heterodermus*.

\* Reisen in südlichen Afrika in den Jahren 1803 bis 1806, I. Band, p. 355.

† Annales du Muséum, v. p. 168.

The species named were evidently most closely allied to one another, and from the descriptions and figures alone it was almost impossible to find out which of the differences were of a really specific value; hence, although, in the 'Catalogue of Colubrine Snakes' (p. 152), I could not hesitate to refer *Ph. albovariatus* to its proper place as a synonym of *A. irregularis*, I withheld my opinion as to *Ph. semivariiegatus* and *Chlorophis heterodermus*, of which I had seen no specimens, mistaking altogether the *Ph. natalensis*, which I have since recognized.

M. A. Duméril was in a still more difficult position than myself when he published his paper, "Reptiles et Poissons de l'Afrique Occidentale" (Archiv. Mus. t. x.), having for examination only the *A. irregularis* in the collection of the Paris Museum. Therefore we can hardly be surprised to find that, in his opinion, the three species of Smith would be distinct from *A. irregularis*, whilst *Chlorophis heterodermus* would be only a synonym.

In order to terminate this state of uncertainty, the attention of travellers and collectors has been directed to these Snakes; and having brought together nearly 100 specimens, with the localities whence they were obtained well marked, I have come to the following conclusions:—

1. *Coluber irregularis*, *Dendrophis Chenonii*, and *Philothamnus albovariatus* are synonyms of the same species, which is the most common of all.

2. *Philothamnus semivariiegatus*, *Ph. natalensis*, and *Chlorophis heterodermus* are distinct species.

3. *Ahetulla hoplogaster* and *A. heterolepidota* are two new species.

4. All these species are distinguished from one another by at least two characters, which are constantly combined with each other; the number and shape of the temporal shields is subject to some variation, not only within the limits of the same species, but also on the two sides of the same individual.

#### *Synopsis of the Species.*

##### I. Ventral shields laterally keeled.

A. Upper labials nine, three entering the orbit.

a. Anal bifid; ventral shields 164–177.... *A. irregularis*.

b. Anal entire; ventral shields 150–157 .. *A. heteroderma*.

c. Ventral shields 207; trunk with black cross-bands anteriorly..... *A. semivariiegata*.

B. Upper labials eight (seven).

a. Two labials enter the orbit; ventral shields 151–168 ..... *A. natalensis*.

b. Three labials enter the orbit; ventral shields 187 ..... *A. heterolepidota*.

##### II. Ventral shields without a trace of lateral keels.

Anal bifid..... *A. hoplogaster*.

*Ahatulla irregularis.*

*Coluber irregularis*, Leach, in Bowdich, Ashantee, App. p. 494.

*Dendrophis Chenonii*, Reinh., in Dansk. Vid. Selsk. Afh. x. 1843, p. 246, tab. 1. fig. 13, 14.

*Dendrophis (Philothamnus) albovariata*, Smith, Illustr. Zool. South Afr., Rept. pl. 65, and pl. 64. fig. 3.

Ventral shields with lateral keels; upper labials nine, three of which enter the orbit; temporal shields generally 1+2; frequently one or two are broken up into two, or the two hinder ones are united; in this case the temporal shields are generally not symmetrical on both sides. Anal bifid; ventral shields 164-167; subcaudals 108-126. Scales smooth, in fifteen rows, apparently with one apical groove. Teeth longest behind, in a continuous series. Green, skin between the scales black, each scale with a white spot on the basal half of its outer margin.

Western coasts of Africa (Fantee, Gambia, MacCarthy Island); Cape Colony. Two young specimens, which we refer to this species, were sent by Consul J. Petherick from Central Africa, 500 miles south of Chartoum.

*Ahatulla heteroderma.*

*Chlorophis heterodermus*, Hallowell, Proc. Ac. Nat. Sc. Philad. 1857, p. 52; Cope, *ibid.* 1860, p. 559.

Ventral shields with lateral keels; upper labials nine, three of which enter the orbit; temporal shields 2+2+2. Anal entire; ventral shields 150-157, subcaudals 83-92. Scales smooth, in fifteen rows, some with two apical grooves. Teeth longest behind, in a continuous series. Green, skin between the scales black; each scale with a white spot on the basal half of its outer margin.

We have received several specimens of this Snake from the Gold-coast.

*Ahatulla semivariiegata.*

*Dendrophis (Philothamnus) semivariiegata*, Smith, Illustr. Zool. South Afr. pl. 59, 60, and pl. 64. fig. 1.

Ventral shields with lateral keels; upper labials nine, three of which enter the orbit; temporal shields in two rather irregular longitudinal series. Ventral shields 207; subcaudals 112. Scales smooth, in fifteen rows. Green anteriorly, yellowish posteriorly; anterior part of the trunk with irregular, narrow, black transverse bars. Cape Colony (Bushman Flat).

*Ahatulla natalensis.*

*Dendrophis (Philothamnus) natalensis*, Smith, Illustr. Zool. South Africa, pl. 64.

Ventral shields with lateral keels; upper labials eight\*, the

\* Eight specimens, examined by myself, have eight upper labials; and

fourth and fifth entering the orbit; temporal shields 2+2+2; two are sometimes united into one. Anal bifid; ventral shields 151-168; subcaudals 114-126. Scales smooth, in fifteen rows, without apical groove. Teeth longest behind, in a continuous series. Green, skin between the scales black, each scale with a white spot on the basal half of its outer margin. Port Natal, and probably Cape Colony.

*Ahætulla heterolepidota.*

Ventral shields with very faint lateral keels; upper labials seven or eight, the third, fourth, and fifth, or the fourth, fifth, and sixth, entering the orbit; one antecular, two postoculars; six of the lower labials are in contact with the chin-shields; temporal shields 1+1. Ventral shields 187; anal bifid; subcaudals 125. The scales are smooth, without groove, and with minute longitudinal striæ (these striæ are lost when the epidermis has gone off); they are arranged in fifteen series in the anterior half of the trunk, and in eleven in the posterior. The posterior maxillary teeth longest, in a subcontinuous series with the others. Head small; neck very slender; body and tail slender. Uniform greenish-olive.

A single specimen, marked "Africa," has been purchased; it is 26 inches long, the head measuring  $\frac{1}{2}$  in., the tail  $8\frac{1}{2}$  in.

*Ahætulla hoplogaster.*

Ventral shields without any trace of lateral keels; upper labials eight, the fourth and fifth entering the orbit; one antecular, two postoculars; six of the lower labials are in contact with the chin-shields; temporal shields 1+1. Ventral shields 150-156; anal bifid; subcaudals 94-105. The scales are smooth, without groove, arranged in fifteen series anteriorly, and in eleven posteriorly. The posterior maxillary teeth longest, in a continuous series with the others. Head rather small, body and tail moderately slender. Green, skin between the scales black, each scale with a white spot on the basal half of its outer margin.

This Snake appears to be more common at Port Natal than *A. natalensis*. An adult specimen is 26 inches long, the head measuring  $\frac{5}{8}$  in., the tail 9 in.

B. On a new South American Species of *Ahætulla*.

*Ahætulla nitida.*

Scales in fifteen rows, smooth, minutely striated, without

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this also is the number shown in the figure of the entire Snake contained in Sir A. Smith's work. On the same plate, however, a separate drawing is given of the same specimen, showing nine upper labials: we cannot help thinking that this was an accidental variation of the normal number, that specimen having had eight labials on one side, and nine on the other.

apical groove. Head small, depressed, with the snout of moderate length, subtruncated in front; rostral shield rather broader than high; loreal not quite twice as long as high; præorbital reaching to, or nearly reaching to, the vertical; two post-orbitals; nine upper labials, the fourth, fifth, and sixth of which enter the orbit; temporals 1+2+2; occipitals rounded, each with a larger rounded scale behind; six lower labials are in contact with the chin-shields. Eye rather large, with round pupil. Body very slender, compressed; tail very long, angular. Ventral shields 165, angularly bent on each side, the central portion being not much broader than long; anal bifid; sub-caudals 153. The posterior maxillary tooth is the longest, not grooved, and is separated from the others by a short interspace. Above uniform metallic brownish-green, below greenish; scales on the back narrowly edged with black; one of the specimens has blackish dots on the crown of the head. No band either on the side of the head or of the body.

This species would enter the subgenus *Uromacer* of Duméril and Bibron.

The British Museum possesses two examples of this species, one from Demerara; the origin of the other is not known. The latter is 32 inches long, the head measuring 7 lines, and the tail 13½ inches.

XXXIII.—On an undescribed Indigenous Form of Amœba.

By G. C. WALLICH, M.D., F.L.S., &c. &c.

[Plate VIII.]

THE occurrence of an undescribed variety of *Amœba* in the immediate vicinity of the metropolis is of interest both on its own account and from the indication it affords that the study of our indigenous Rhizopodal fauna is still unexhausted. The variety in question was recently obtained, in considerable abundance, from the ponds on Hampstead Heath; and inasmuch as every specimen examined by me has presented the very singular characters to which I am now about to draw attention, there is every reason to believe that these are normal, although perhaps not permanent in their nature.

According to the descriptions of the commoner forms—as, for example, *A. princeps*, *A. diffluens*, or *A. radiosa*\*—it would appear that the sarcode substance is uniformly differentiated into “endosarc” and “ectosarc.” In other words, setting aside the elementary organs which may be said to be shadowed forth by the contractile vesicle, the nucleus, and the protoplasmic granular

\* It will, I think, eventually be found that all these are mere transitory phases of one and the same species.